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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/749,743	12/28/2000	Masataka Goto	32307-168819	5546

26694 7590 10/23/2003

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EXAMINER

LAO, TIM P

ART UNIT	PAPER NUMBER
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2655

DATE MAILED: 10/23/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

2

Office Action Summary

Application No.

09/749,743

Applicant(s)

GOTO ET AL.

Examiner

Tim Lao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Yano et al. (JP-11095793-A). Regarding claims 1,4-6, Yano discloses a device capable of interpreting an input voice so that when a user does not remember a word or a sentence in an input speech and if the word or sentence is a wild card expression (predefined key-word string), an alternative expression (complement candidate) can be selected by the user to replace the wild card expression. For example, when the user does not remember the hotel named 'TOKYO stay-in hotel' and when the user performs a voice input as 'TOKYO ra,ra,ra hotel', where 'ra,ra,ra' or 'something' is a wild card expression, then information corresponding to a proper name, in this case 'stay-in', is outputted. In his invention, Yano discloses a voice input interpreting equipment or apparatus comprising of:

1. An audio input unit 100 drawing 1, such as a microphone, for inputting speech (speech input means);
2. Means for carrying out speech recognition of the voice or speech input;
3. Detecting means for searching the 1st information of a regular vocabulary and ask for a corresponding vocabulary (complement candidate), based on the portion of

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vocabularies (word fragment) which is met by detecting a word fragment as a result of speech recognition means;

4. A permutation representation collating means to replace the portion of the alternative expression in the portion of the vocabulary of the norm (complement means). In addition, Yano shows that the permutation representation collating section 103 drawing 6 checks whether the speech recognition result of the voice-analysis section 101 drawing 6 has wild card expression. This is met by predefined key-word string based on the result of speech recognition. Moreover, Yano cited in his invention that "Expressional kind" information is information showing non-wild card expression, where each of the word contained in the vocabulary is not wild card expression, and wild card expression. In other words, the detecting function of the apparatus is capable of making a distinction between non-wild card expression (word fragment) and wild card expression (predefined key-word string). The interpretation of this particular citing is met by word fragment recognition based on predefined key-word string. Finally, Yano also discussed the processing of the priority or ranking of a list of candidates once a list of suitable vocabularies is extracted from the lexical storage section 202 drawing 12. This is met by selecting a complementary candidate from an existing plurality of complementary candidates.

Regarding claims 7,10-12, Yano discloses a voice input interpreting method comprising of:

1. An audio input step for inputting speech (speech input means);
2. A step for carrying out speech recognition of the voice or speech input;

3. Detecting step for searching the 1st information of a regular vocabulary and ask for a corresponding vocabulary (complement candidate), based on the portion of vocabularies (word fragment) which is met by detecting a word fragment as a result of speech recognition step;

4. A permutation representation collating step to replace the portion of the alternative expression in the portion of the vocabulary of the norm (complement means). In addition, Yano shows that the permutation representation collating section 103 drawing 6 checks whether the speech recognition result of the voice-analysis section 101 drawing 6 has wild card expression. This is met by predefined key-word string based on the result of speech recognition. Moreover, Yano cited in his invention that "Expressional kind" information is information showing non-wild card expression, where each of the word contained in the vocabulary is not wild card expression, and wild card expression. In other words, the detecting function of the apparatus is capable of making a distinction between non-wild card expression (word fragment) and wild card expression (predefined key-word string). The interpretation of this particular citing is met by word fragment recognition based on predefined key-word string. Finally, Yano also discussed the processing of the priority or ranking of a list of candidates once a list of suitable vocabularies is extracted from the lexical storage section 202 drawing 12. This is met by selecting a complementary candidate from an existing plurality of complementary candidates.

Regarding claims 13,16-18, Yano discloses a voice input recording medium that stores programs or softwares comprising of:

1. An audio input step for inputting speech (speech input means);
 2. A step for carrying out speech recognition of the voice or speech input;
 3. Detecting step for searching the 1st information of a regular vocabulary and ask for a corresponding vocabulary (complement candidate), based on the portion of vocabularies (word fragment) which is met by detecting a word fragment as a result of speech recognition step;
 4. A permutation representation collating step to replace the portion of the alternative expression in the portion of the vocabulary of the norm (complement means).
- In addition, Yano shows that the permutation representation collating section 103 drawing 6 checks whether the speech recognition result of the voice-analysis section 101 drawing 6 has wild card expression. This is met by predefined key-word string based on the result of speech recognition. Moreover, Yano cited in his invention that "Expressional kind" information is information showing non-wild card expression, where each of the word contained in the vocabulary is not wild card expression, and wild card expression. In other words, the detecting function of the apparatus is capable of making a distinction between non-wild card expression (word fragment) and wild card expression (predefined key-word string). The interpretation of this particular citing is met by word fragment recognition based on predefined key-word string. Finally, Yano also discussed the processing of the priority or ranking of a list of candidates once a list of suitable vocabularies is extracted from the lexical storage section 202 drawing 12. This is met by selecting a complementary candidate from an existing plurality of complementary candidates.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-3,8-9,14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yano et al. in view of O'Shaughnessy et al. ("Automatic identification of filled pauses in spontaneous speech," March, 2000). Although Yano does not teach the detection means of speech filled pauses, O'shaughnessy teaches the method of identifying filled pauses in speech (column 2, page 620). O'shaughnessy also discussed which part of the vocabularies or word fragment that filled pauses tend to occur. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yano to include the filled pause detection method in speech as taught by O'shaughnessy in order to provide a more accurate method of detecting filled and unfilled (silent) pause; Thus, a more reliable way of word fragment detection and speech complement can be carried out.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent Documents: 5,799,276 August, 1998 Komissarchik et al.; O'shaughnessy, D. "Recognition of hesitations in spontaneous speech," ICASSP-

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92., Vol. 1, March 23-26, 1992, pp. 521-524; Japan Patent Documents: JP-10222337

August 1998 Sawada et. al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tim Lao whose telephone number is 703-305-8955.

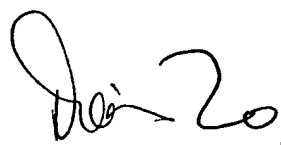
The examiner can normally be reached on M-F, 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 703-305-4827. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-9000.

Tim Lao
Examiner
Art Unit 2655

TL


DORIS H. TO 10/20/03
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2300